

PROBLEMS OF LEGAL REGULATION OF THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN COURT PROCEDURES WITHIN THE FRAMEWORK OF THE UKRAINE-EU ACTION PLAN

O. Chernykh

State Organization «Valentyn Mamutov Institute of Economic and Legal Research of the National Academy of Sciences of Ukraine», Ukraine
Taras Shevchenko Boulevard, 60, Kyiv, 01032
alexandrchas@gmail.com
<https://orcid.org/0000-0002-5904-1734>

Abstract. The article is devoted to the study of discussion issues of scientific developments in the field of legal support of the implementation of the technology of "artificial intelligence" in the judicial procedures of Ukraine on the basis of international experience and taking into account the latest changes in the legislation of Ukraine.

The article deals with the main international legal principles of artificial intelligence application, their practical implementation in Ukraine, the problems of defining the main institutional categories, separating the technical aspects of the functioning of "artificial intelligence" from the legal ones and trying to determine the key factors that the legislator should consider in the development of legislation in the field of implementation of "artificial intelligence" in legal proceedings. The legal analysis of five principles of artificial intelligence functioning in legal proceedings is carried out, the development of four forms of interaction between artificial intelligence and human in legal proceedings is presented, the risks of artificial intelligence application in democratic societies are analysed. Separately, the article analyses the controversial introduction of the category of "electronic person (personality)", expressed a position on the inadmissibility of granting the legal personality of artificial intelligence technology.

Keywords: Justice, artificial intelligence, process of justice, judgment, commercial process, civil process, principles of artificial intelligence, electronic person.

Introduction

The widespread use of "artificial intelligence" technologies (hereinafter referred to as AI), in particular the court "Chat-bots", has led to discussions on the implementation of the use of AI in court procedures in Ukraine and the use of international experience, in particular, Chinese, Brazilian and the United States. Research on these issues is focused on scientists, lawyers and legislators from many countries. Automation of court processes and the use of existing systems from the USA and China can positively affect the rule of law in Ukraine and contribute to the improvement of the investment climate, which is objectively associated with the acceleration of the post-war revival of Ukraine.

At the same time, there are risks identified by international and Ukrainian experts that require deep analysis and consideration in the development of state strategies and laws of Ukraine.

Analysis of recent research and publications

The issue of artificial intelligence in legal proceedings is analyzed by Ukrainian scientists, in particular, Gudima T.S., Baranov O.A., Grabovskaya T.G., Katkova M.V., Karmaza O.O., Kamyschansky V.S., Martsenko, T.V. Fedorenko O.O., Yastrebov E.O., Kharitonov O.I. and others.

International research on the implementation of artificial intelligence in justice and legal activities are engaged in scientists among which should determine the study of the Hague Center for Artificial Intelligence (Netherlands), the Corporation of Legal Services (USA), Innovation Center of the American Bar Association (USA), the Hulton Society of Legal Services Ontario (Canada), Stanford University (USA), Edinburgh, Cambridge, and Edinburgh Napier University.

Among the studies should be noted the study of the Hague Centre for Artificial

Intelligence [1], as well as documents of international organizations, in particular:

European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103 (INL) [2]

European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment, [3]

Organisation for Economic Co-operation and Development, Recommendation of the Council on Artificial Intelligence, OECD/LEGAL/0449 [4]

White Book of Artificial Intelligence [5]

Declaration on the risks of decision-making using a computer or AI in the field of social protection [6]

The article is aimed at defining the basic principles of application of AI in legal proceedings, description of risks and negative consequences of uncontrolled application of AI in terms of violation of fundamental human rights and freedoms, definition as a priority principle “under user control” in the development of all scientific and practical models of using AI in legal proceedings.

Results of research

As part of the implementation of the EU-Ukraine Action Plan [7], one of the priority areas is the establishment of the rule of law and judicial reform.

In 02.12.2020, the Cabinet of Ministers of Ukraine approved the Concept for the Development of Artificial Intelligence in Ukraine (hereinafter – “Concept”). This document defines in particular the directions of state policy in the economy and public administration, in which technology of artificial intelligence can be involved.

Among the problems of the concept and problems that the development of artificial intelligence technology should solve are defined – “the lack of implementation of artificial intelligence technologies in judicial practice”.

The development and implementation of artificial intelligence technologies in the judicial systems of the leading countries of the world, contributed to the need to develop common principles and rules for their use. In

December 2018, the European Commission on the effectiveness of Justice adopted an ethical charter on the use of artificial intelligence in judicial systems and their environment,[8] which was the first step of the Commission in the field of regulating the risks of uncontrolled use of AI in legal proceedings.

In particular, the Charter enshrines five principles regarding the use of artificial intelligence in the administration of justice:

- respect for fundamental human rights during its use;

- the use of artificial intelligence technologies to identify unfair judicial practice by analysing the texts of court decisions and other data that are formed in computerized systems/ registers in the process of justice;

- non-discrimination, namely prevention of development of any discrimination between individuals or groups of persons;

- quality and safety related to the processing of court decisions and data in a safe technological environment;

- the principle of “under user control”/ “user-controlled”; transparency, impartiality and justice.

These five principles are elaborated in detail by scientists in order to develop and implement into practice and should be implemented in legislation, in order to prevent the replacement of the justice system with the system of automatic formation of court decisions.

The principle of respecting fundamental human rights in the use of AI is that the entire process of applying AI in legal proceedings should be subject to international human rights standards, and not ignore them in a deal of technical progress. The basis of the legal understanding of AI Martsenko N. distinguishes the principle of the rule of law as a prerequisite for technical development. [9, p. 95]. Which emphasizes the primacy of the rule of law over the technological part and should always be taken into account when using AI. The observance of rights and freedoms also consists in the observance of Article 6 of the Convention for the Protection of Human Rights and Fundamental Freedoms (hereinafter – the Convention). Given that Ukraine is the “leader” in appeals to the ECHR (3th place in the number of appeals [10]),

which indicates the bad quality of the court procedures, the development and implementation of the concepts of the use of artificial intelligence technology in legal proceedings is of priority for ensuring Ukraine's compliance with Article 6 of the Convention and the implementation of the EU-Ukraine Action Plan for the post-war restoration of Ukraine.

The principle of application of AI technologies to identify unfair judicial practice is already widely used. In particular, in China, Argentina, France, Great Britain, USA, Brazil [11] uses a variety of AI systems, even in China, when judges are required in case of disagreement with the decision of the formed AI to argue in writing their disagreement [12]. But analysis of judicial practice, prevention of unfair judicial practice and risks of interference or distortion of the justice process must be distinguished among themselves. Thus, in order to protect the justice process in France, restrictions have been imposed on the use of AI to “predict the court decision”, because in the opinion of the judiciary, this undermines the foundations of justice. [13] Therefore, the principle of using AI to identify unfair judicial practice should not be absolute, but to ensure the use of AI specifically to identify unfair actions, rather than forecasting court decisions or simulating the justice process.

The development of the principle of non-discrimination in the application of AI in legal proceedings, reasoned by the fact that the computer system programmed for certain algorithms, may not take into account the principles of equality and non-discrimination important for modern justice on the grounds of race, article, age, language, etc. In 2016, a report was published in the United States that exposed the issue of racist conclusions used by the well-known American program “COMPAS” (“correction of offenders with profiling of alternative sanctions”). According to the report, the AI program “COMPAS” was prone to the erroneous labelling of African Americans and identify them as “black violators”. [14] The principle of non-discrimination requires assessing the risks of discrimination and applying user control to

programmed algorithms, in accordance with the principle of “user-controlled”.

The study of the principle of quality and safety of the use of AI in inter-industry studies has established certain limitations on the use of AI, namely:

- Difficulty imagining problems using mathematical functions is often difficult or impossible for AI;
- Overfitting, when AI can generate functions that do not exist and which are not needed;
- Lack of effective generalization due to limitations (poor quality or unreliable data) [15].

This confirms, in turn, the importance of compliance with the principle of “under the control of the user”.

As noted above, the most important place in the application of AI in court procedures is the principle of “user-controlled” (under user control). The paradox is that from the point of view of mathematical algorithms, legislation and law enforcement may not be ideal (or as mentioned above, not to be transformed into mathematical functions), so according to Sandra Wachter (Oxford University, Alan Turing Institute), “the current laws regardless of the country do not correspond to the ideal path of AI technology development” [16]. That is why AI should be controlled by the user because, from the point of view of justice and justice, decisions generated by AI can be absurd or violate fundamental human rights (as noted, in particular in the analysis of the principle of non-discrimination). The study of the issue of AI control in the legal proceedings and responsibility of the user was carried out by Karmaz O. and Grabovska O., which defined the category of human responsibility for the use of AI in legal proceedings. [17,p.9] this separates the issue of responsibility for the judgment taken from the implementation of auxiliary functions of analysis of judicial practice, technical set of the text, which cannot be equated to the judicial process.

Depending on the impact of man on the AI systems, it is necessary to distinguish between the amount of responsibility for the quality and fairness of court decisions created by AI. On the example of proposed schemes of

human and AI participation in the management of automated navigation systems and the study of the issue of liability for damages in the event of marine accidents, conducted by Lucy Carey (University of Aberdeen) [18], it is possible to determine the following options for the work of AI and man in the process of justice.

AI helps produce managerial (judicial) decisions by offering behavioural options. Direct justice is carried out by a person.

The AI carries out current activities (actually generates court decisions). A person checks the proposed solutions and at any time can intervene in the process of AI.

Artificial intelligence independently conducts the process of justice, a person can cancel the decision in the order of appeal review.

Artificial intelligence fully independently conducts the process of justice.

Based on these four types of human-AI interaction, it is possible to determine that the use of fully autonomous AI (the fourth type) is contrary to the task of justice and can be fraught with distortion of justice, so the introduction of a fully autonomous AI in a democratic society is impossible.

At the same time, the issue of legal regulation of the “electronic person” remains controversial, the possibility of being a subject of legal relations in AI (in particular, to perform the functions of the judiciary), as noted Karmaz O., regarding the possibility of acquiring the legal status of such an “electronic person (personality)” [19] given the significant involvement of the use of artificial intelligence technology, it is important to determine, that artificial intelligence cannot have its own legal entity, it is a coordinated entity in a way to simplify the performance of functions by the subjects and for the actions committed, transactions performed, calculations must be responsible for the person using artificial intelligence and who acquires rights and responsibilities in connection with the actions committed by artificial intelligence. According to the author, AI can not have its own legal personality, precisely because a person should monitor compliance with the five principles of using AI, taking into account the three technical limitations of AI, determined by cross-industry research.

Conclusion

The introduction of artificial intelligence technologies without reasonable scientific development of the main institutional provisions, carries the risks of discrimination of the technology itself, abuse of application, distortion of information used by artificial intelligence, loss of state and public control over the process of justice. Therefore, there is a need for scientific justification and development in the field of artificial intelligence in economic justice, in particular:

- determination of scientifically grounded level of use of technology of artificial intelligence in legal proceedings;
- determination of state mechanisms for control over information used in calculating the results of artificial intelligence technology in legal proceedings;
- development of legal mechanisms to protect the technology of artificial intelligence in legal proceedings from the use of fake, false (false) information;
- determination of the legal status of artificial intelligence technology in legal proceedings;
- Creating a system to prevent the risks of using AI and distinguishing AI from software [19. p.405];
- definition of legal status of subjects of use of technology of artificial intelligence in legal proceedings, etc.

These issues require scientific research using international experience and involvement of domestic scientists in the exchange of developments conducted by international scientific circles.

References

1. The Hague Institute for Innovation of Law. Digital technology and judicial reform. URL: <https://www.hiil.org/research/digital-technology-and-judicial-reform/>.
2. European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103 (INL)). URL: https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html.
3. CEPEJ European Ethical Charter on the use of artificial intelligence (AI) in judicial systems and their environment. URL: <https://www.coe.int/en/web/cepej/cepej-european-ethical-charter-on-the-use-of-artificial->

intelligence-ai-in-judicial-systems-and-their-environment#:~:text=The%20CEPEJ's%20view%20as%20set,on%20Human%20Rights%20(ECHR)%20and.

4. Organisation for Economic Co-operation and Development, Recommendation of the Council on Artificial Intelligence.
URL: <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449>.

5. White Paper on Artificial Intelligence.
URL: https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf.

6. Declaration of the Committee of Ministers on the risks of decision-making through computer or artificial intelligence in the field of social security network. March 17, 2021

URL: https://search.coe.int/cm/Pages/result_details.aspx?ObjectId=0900001680a1cb9

7. Action plans of the Council of Europe for Ukraine. Official resource of the Representation of Ukraine in the Council of Europe.
<https://coe.mfa.gov.ua/spivrobitnictvo/plani-dij-radi-yevropi-dlya-ukrayini>.

8. European Commission for the Efficiency of Justice (2019). European Ethical Charter on the use of AI in the judicial systems and their environment. Adopted at the 31st plenary meeting of the CEPEJ (Strasbourg, 3-4 December 2018).
URL: <https://rm.coe.int/ethical-charter-en-forpublication-4-december-2018/16808f699c>.

9. Martsenko N. the legal regime of artificial intelligence in civil law. Actual problems of law. 2019. No. 4. C. 91–98.

10. European Court of Human Rights. PENDING Applications allocated to a judicial formation requêtes pendantes devant une formation judiciaire 31/12/2019
URL: https://www.echr.coe.int/documents/d/echr/Stats_pending_2020_BIL.

11. Reiling A. D. (Dory). Courts and Artificial Intelligence. International journal for court administration. 10.08. 2020.
URL: <https://iacajournal.org/articles/10.36745/ijca.343>.

12. Guodong Du, Meng Yu, Yuan Yanchao. Chinese Judges Shall Undergo Review and Approval Before Rendering Judgments Sat, 20 Oct 2018.

UPD: <https://www.chinajusticeobserver.com/insights/chinese-judges-shall-undergo-review-and-approval-before-rendering-judgments.html>.

13. Stec A. Artificial intelligence will be used in Ukrainian courts. Zaxid.net. 10.02.2021.
URL: https://zaxid.net/shtuchniy-intelekt-hochut-zastosovuvati_u_sudah_pershoyi_instantsiyi_n1514249.

14. Plakhotnik O. Practical use artificial intelligence in criminal proceeding. January 2019. Herald of criminal justice. DOI:10.17721/2413-5372.2019.4/45-57.

15. Vasylenko M. D., Slatvinska V. M. Artificial intelligence in judicial practice: features and its capabilities (intersectoral research). Law and Society 4/2022. 271-278.
http://pravoisuspilstvo.org.ua/archive/2022/4_2022/39.pdf.

16. Moor, J.H. The Status and Future of the Turing Test. Minds and Machines 11, 77–93 (2001).
<https://doi.org/10.1023/A:1011218925467>.

17. Karmaza, O.; Grabovska, O. Electronic person (personality) as a subject of legal relations in the civilized process. Entrepreneurship, economy and law, 2021, 2: 5-10.

18. Carey, Luci, Contractual and Tortious Maritime Liability Regimes and the Introduction of Autonomous Vessels (March 1, 2023). NUS Law Working Paper No. 2023/012, NUS Centre for Maritime Law Working Paper 23/03, Available at SSRN: <https://ssrn.com/Abstract=4403620>
or <http://dx.doi.org/10.2139/ssrn.4403620>.

19. Gudima, T.; Kamishanskiy, V. Artificial intelligence as an instrument of digitalization of foreign economic policy: features of legal regulation. Financial and credit activity problems of theory and practice, [S. l.], v. 3, n. 50, p. 398–409, 2023.
URL: <https://fkd.net.ua/index.php/fkd/article/view/4039>

The article has been sent to the editors 28.08.23.
After processing 13.09.23
Submitted for printing 15.09.23

Copyright under license CCBY-SA4.0.